

Climate positive energy

Mattias Gustafsson

Project manager for Stockholm Biochar Project

Founder of the Swedish Biochar Association

Vice CEO of EcoTopic AB



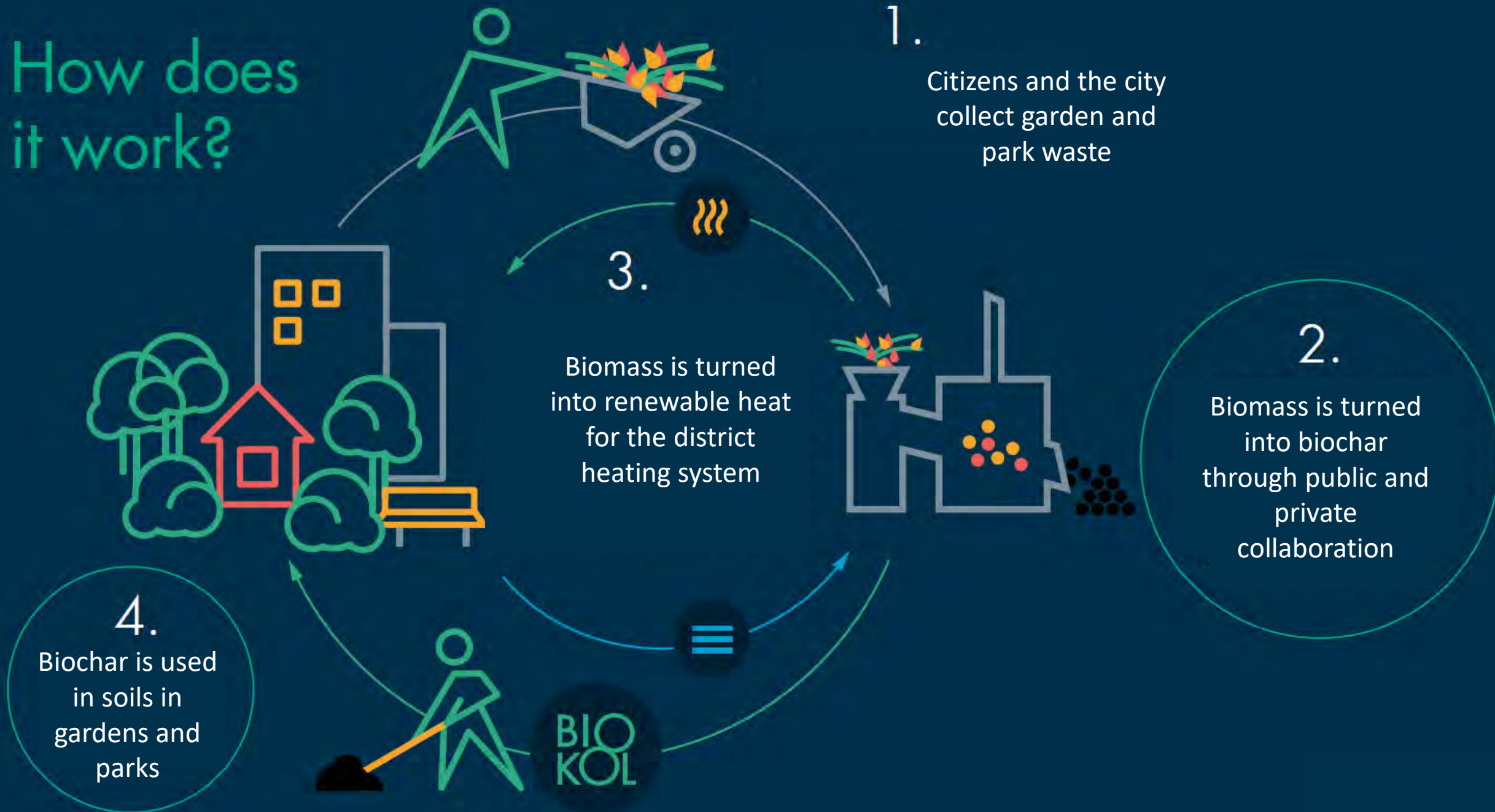
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Winning Mayors Challenge



How does it work?



Technology

- Carbonization
 - Heating in an oxygen free environment
- Heat
 - Syn gas
 - Low emissions
- Biochar
 - Char
 - Ash

The Stockholmer's garden waste becomes a part of the cycle

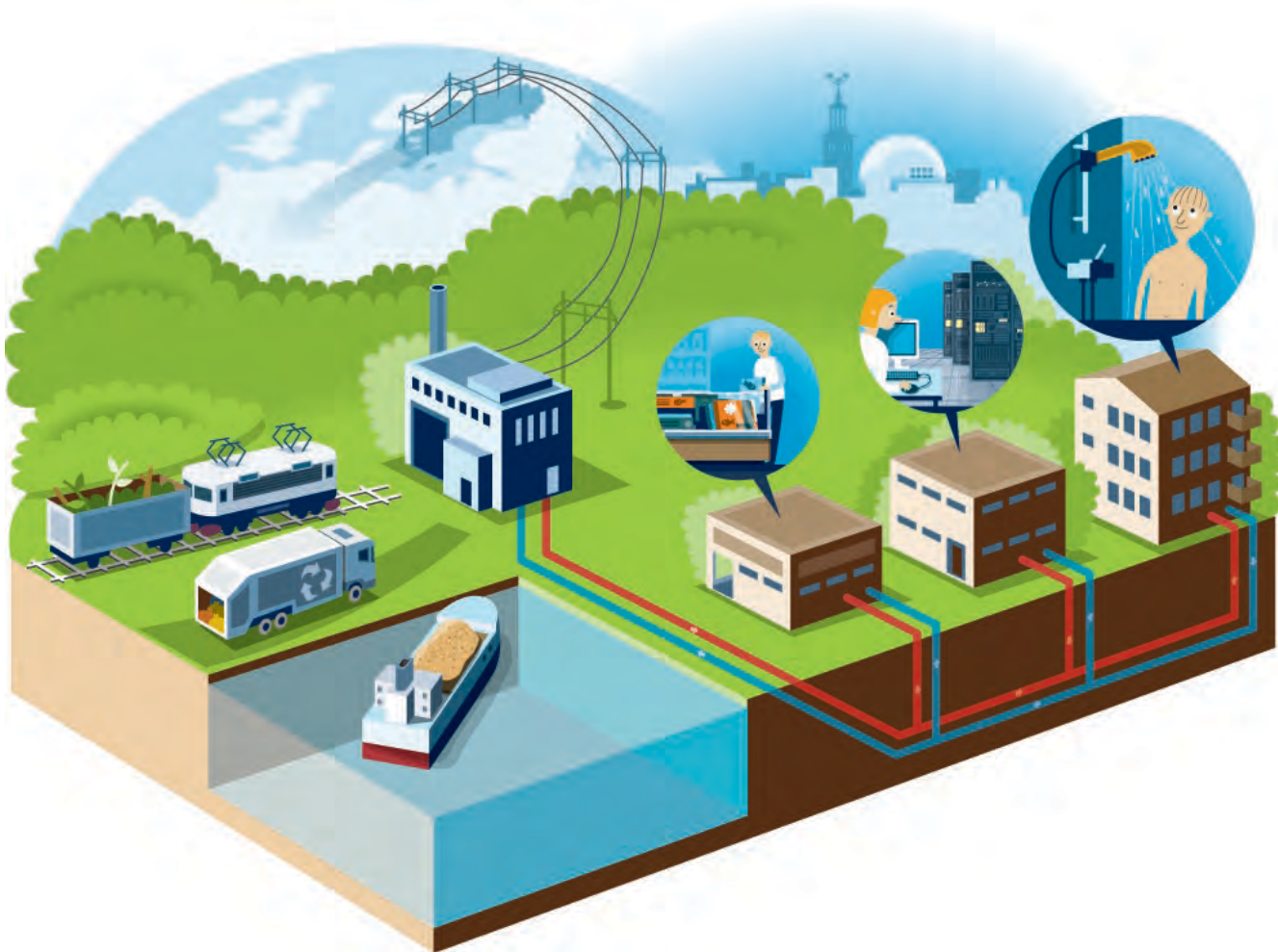


Et samarbete mellan



Stockholm Biochar Project är en av fem vinnare av Bloomberg Philanthropies' Mayors Challenge.

Open district heating



- Stockholm Exergi
- Distribution of excess heat
- Heat supply for 25 000 apts

Source: Stockholm Exergi (2019)



Pilot plant

Renewable heat to 80
apartments

Biochar corresponding to
CO₂-emissions from 700
cars

Full scale

Renewable heat to 400
apartments

Biochar corresponding to
CO₂-emissions from 3500
cars

Can you make a profit on biochar?

Turning waste
into resource

Biochar
plant

Substituting
finite resources
with own
biochar

Connections

Ground work

Selling
heat



Potential global replicatoin



The urban carbon sink

Urban tree beds with structural soil and biochar



Region with 3,5
million citizens in the
year of 2030

100 yrs



15 yrs



50 yrs



6 yrs



30 yrs



100 yrs



15 yrs

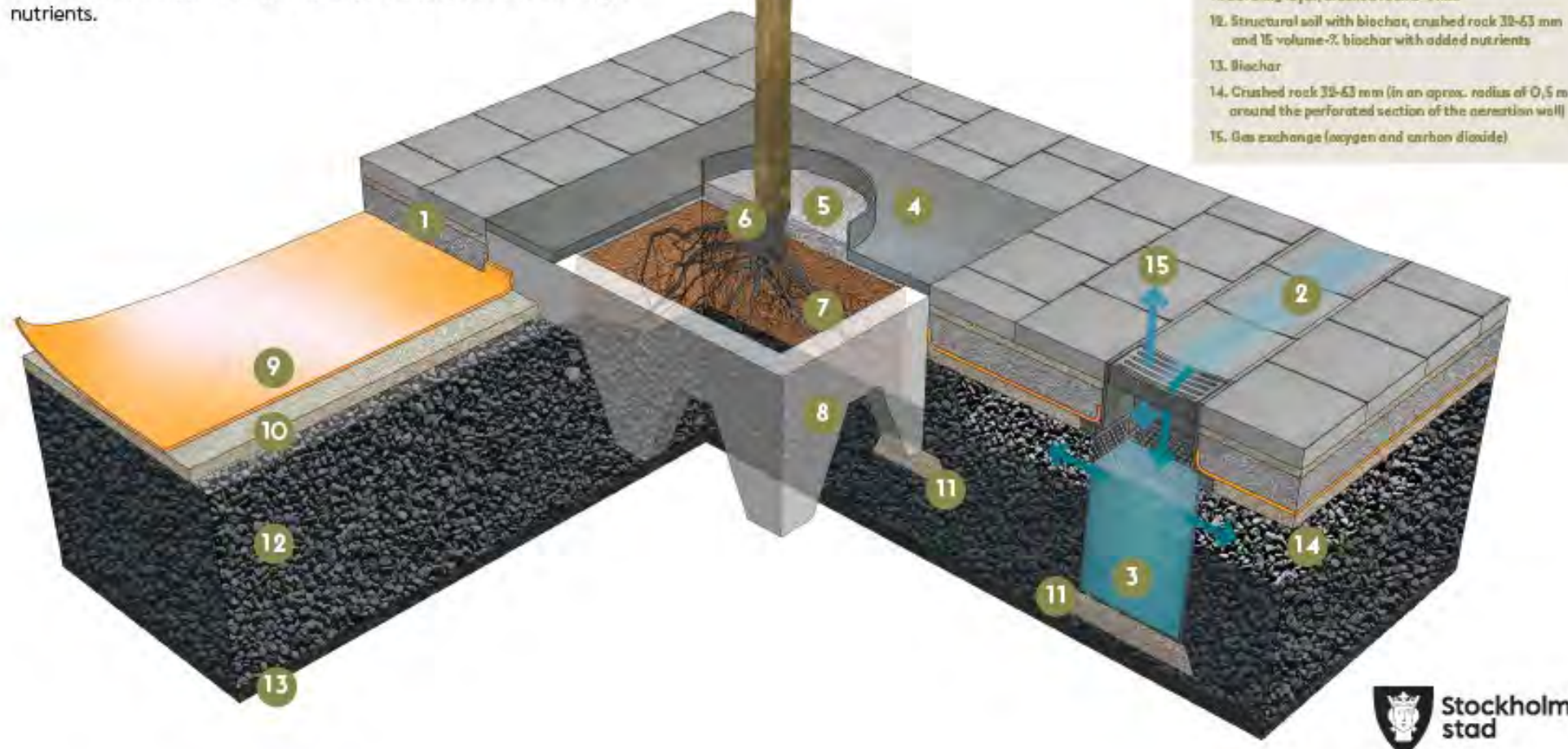


75 yrs



STRUCTURAL SOIL WITH BIOCHAR

The City of Stockholm have set as a goal to create sustainable and durable plant beds from locally sourced materials. Structural soils with biochar binds carbon from the atmosphere and reduces leaching of nutrients.







Nybrogatan 2015,
biochar & macadam

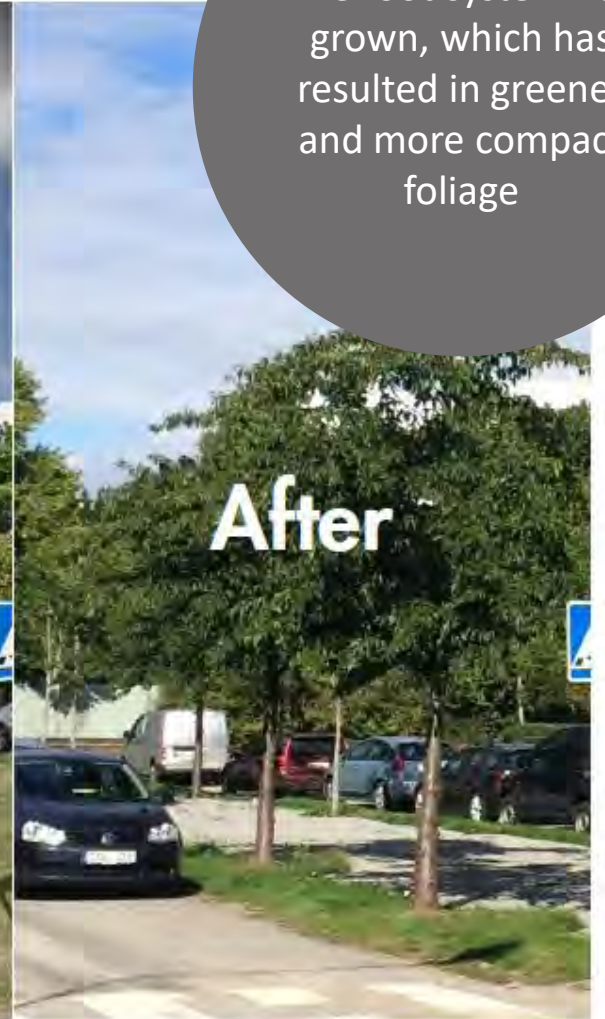


Macadam 32-63 mm
with 15% nutrient
enriched biochar



Nybrogatan
2016, magnolia

After one year with biochar

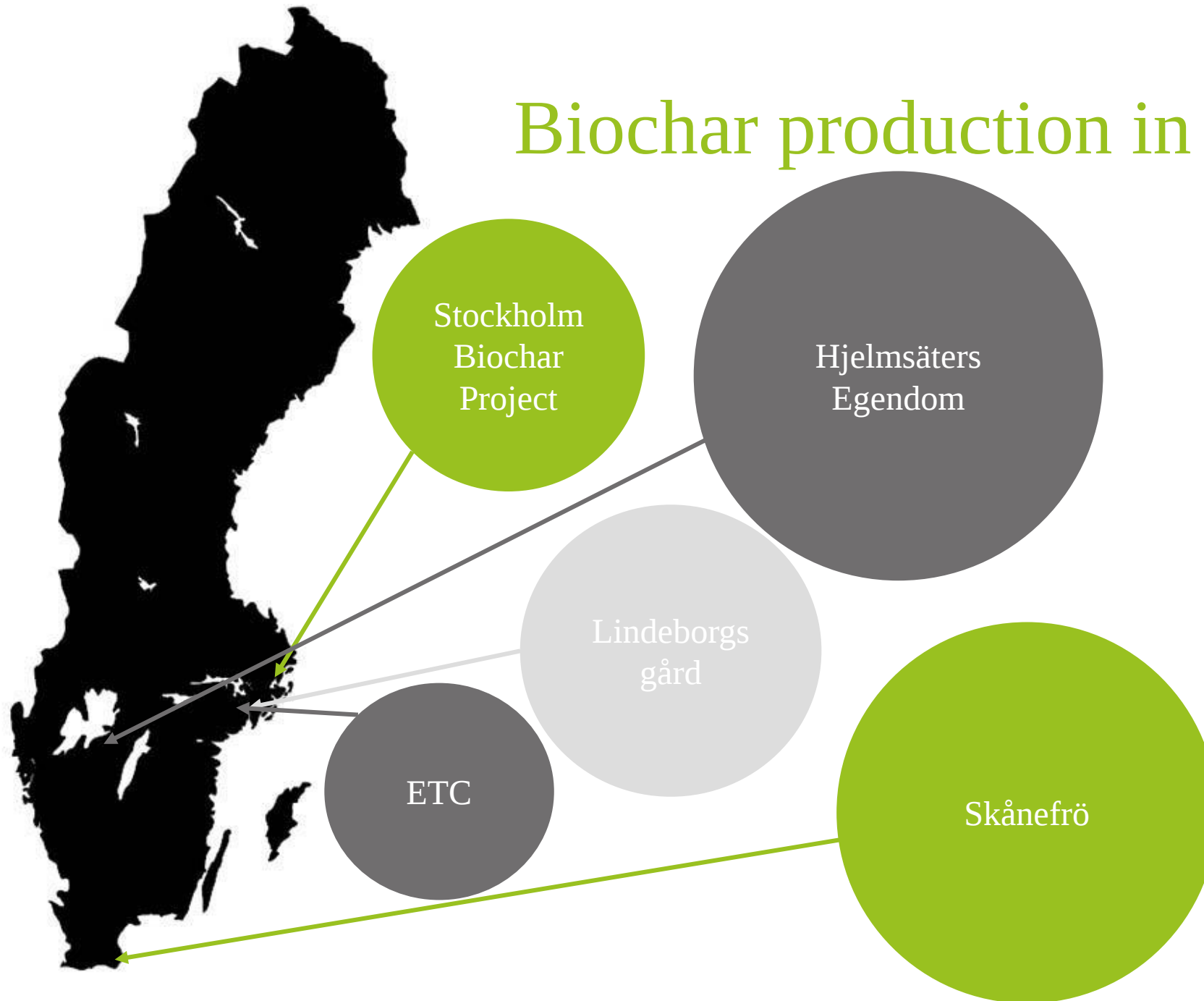


The root system has grown, which has resulted in greener and more compact foliage

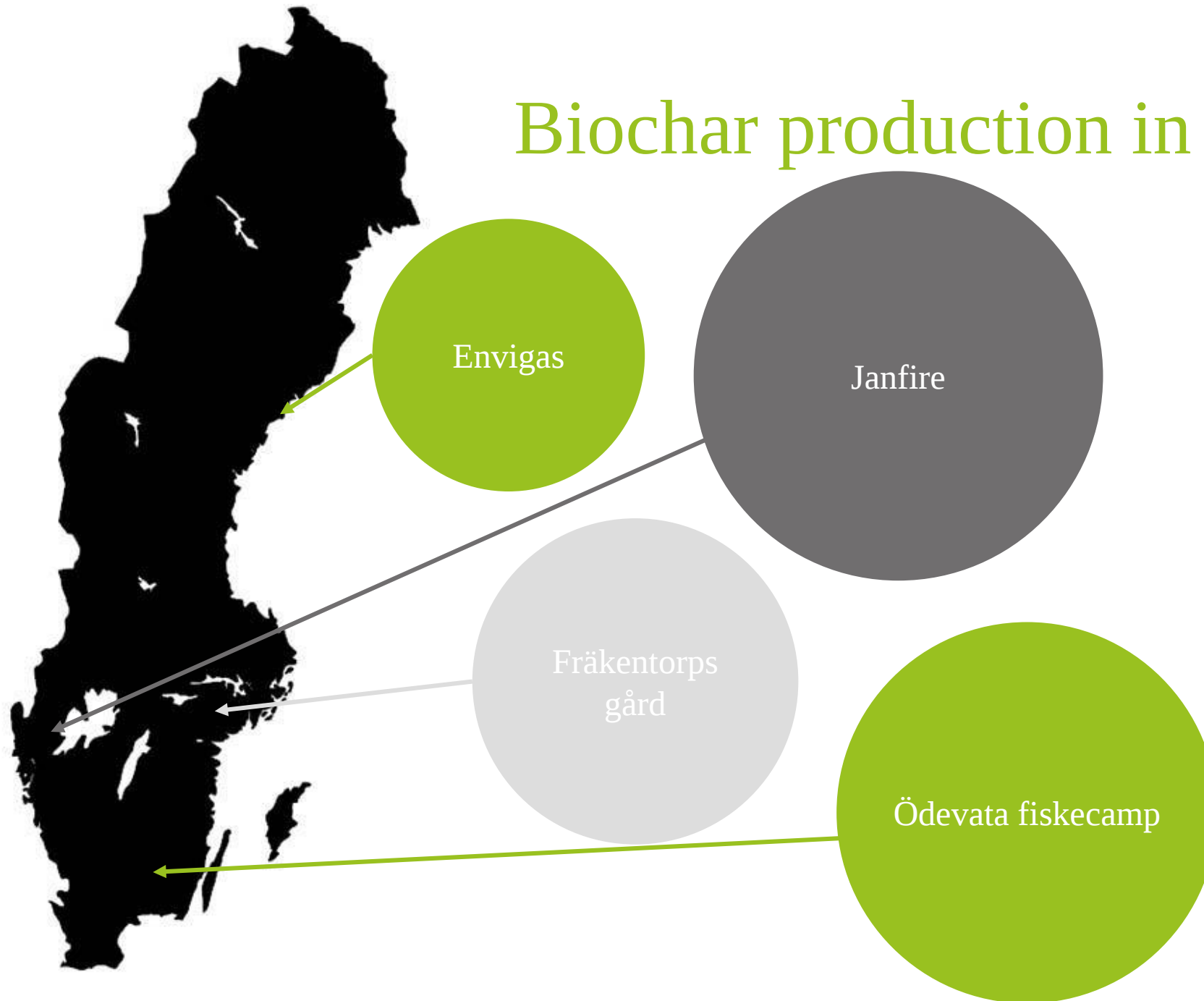
Biochar in Sweden

Production, use and need for development

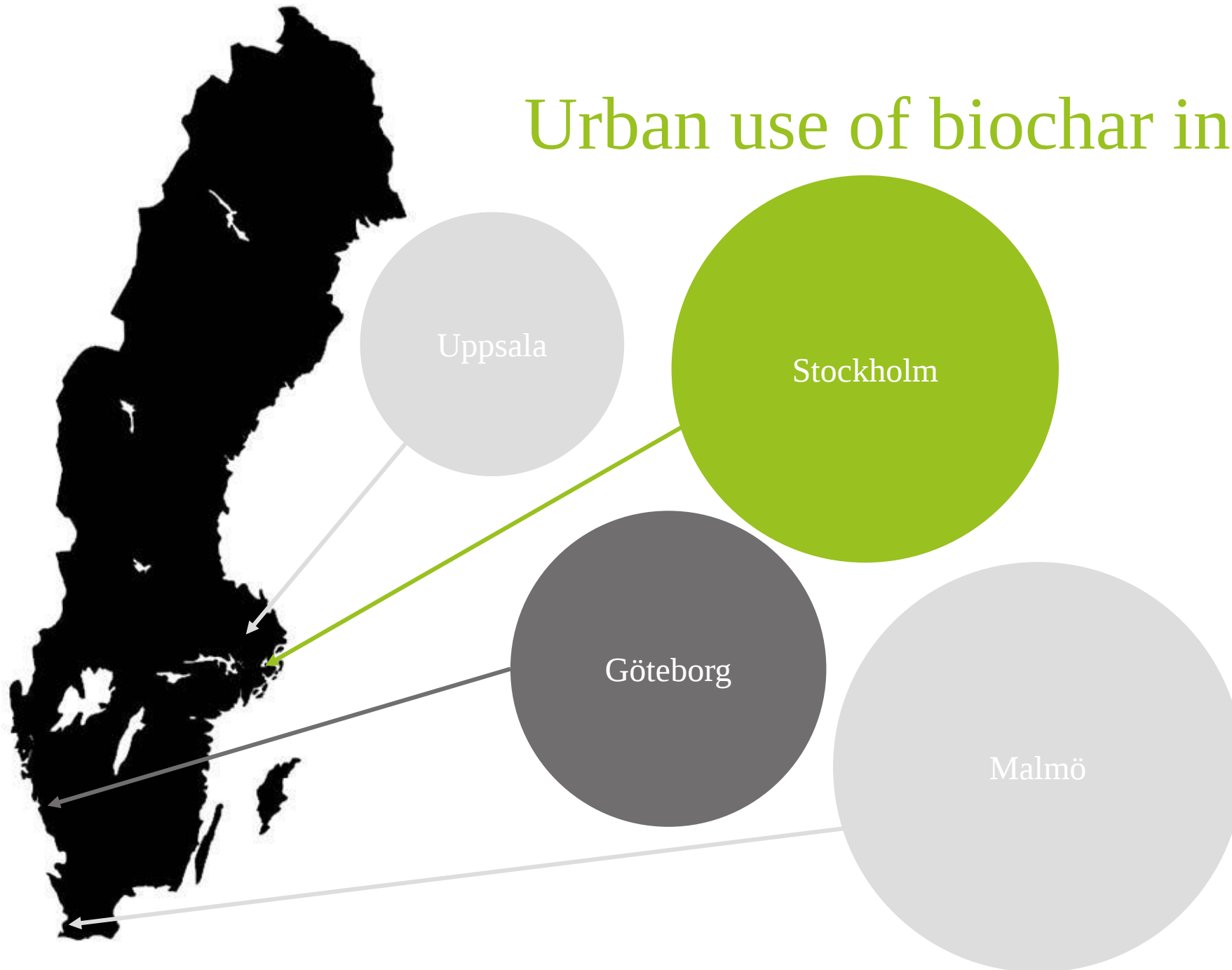
Biochar production in Sweden



Biochar production in Sweden?

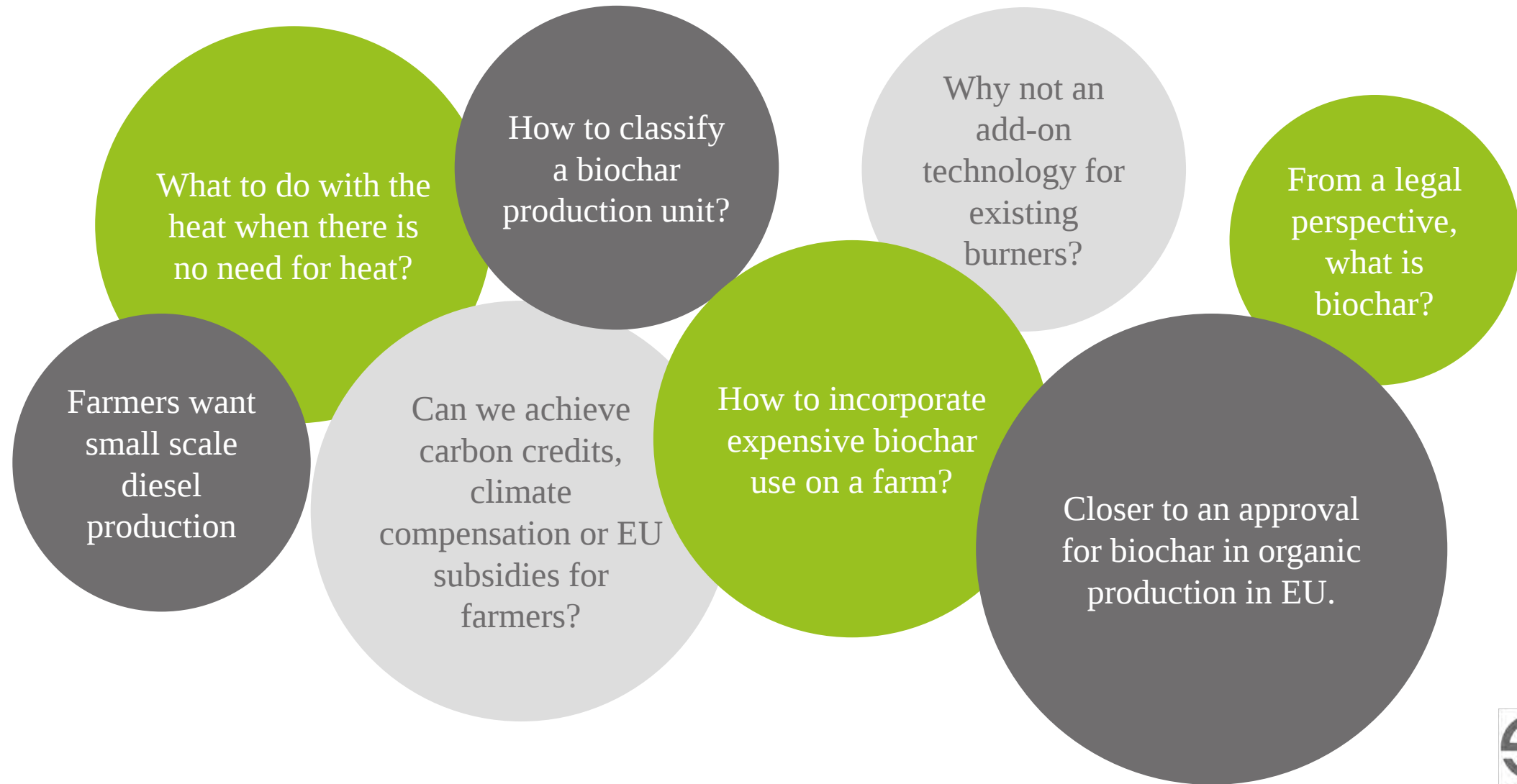


Urban use of biochar in Sweden





How to produce and use more biochar?



Thank you for your attention!

Mattias Gustafsson

mattias@ecotopic.se & www.ecotopic.se

